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REMARKS

This Amendment and Request for Reconsideration is submitted in response to the Office communication dated December 4, 2003.

Original claims 1-12 were rejected under 35 USC 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Several of the objections were directed to antecedent basis for certain terms. Those objections are believed to have been overcome by the submission of replacement claims as a part of this response.

It is pointed out that the requirement of 112 relates to that subject matter "which Applicant regards as the invention". An examiner is not authorized to reject on the basis of his/her own opinion of the nature of the invention. In this case, the examiner has required that Applicants include allegedly essential steps that he believes are part of the invention. Specifically, it has been required that the claims specifically state the place where cooling is performed. This requirement should be withdrawn. A Jepson style claim sets forth a description of a procedure which is known in the art and then adds a specific improvement. That improvement is not and need not be something that happens at the end of the prior art procedure.

In part, the examiner asks how the mixture can come out of the extruder after it has been cooled. Certainly, nothing in the specification states that cooling is so extensive that the mass freezes in place. The examiner's attention is directed to element 8 which is a cooling device at the beginning of the barrel used to prevent overheating. Obviously, it is possible to cool in the barrel and still be able to move the mass forward to eventual exit.

Applicants' extruder 12 includes a barrel 6 and an extrusion head 13. The cooling before exit from the extruder as a whole, reference numeral 12, takes place in calibrator 15, on mandrel 17, and at cooler 19. There can be further cooling after removal from the extruder such as by air blowing or natural convection. (Spec. p.13, lines 31, 32)

The examiner says that "(T)he claim reads as if the formation of the porous element and cooling it takes place in the barrel". That is clearly a misreading of the claim, not based on the claim language, and such interpretation is clearly unwarranted. Nevertheless, the claims have been rewritten. Neither the old nor the new claims read or imply that cooling takes place in the barrel. Neither do they say or imply that the cooling does not take place in the barrel. Applicants do not believe that their invention resides in the place of cooling and have opted not to include such limitation in their broad claims.

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The examiner's attention is also directed to Yang et al, which he cited as the primary reference, specifically to Yang's extruder 10 described therein which includes an extruder barrel 20 and a cooling jacket 52. What Applicants regard as their invention is that they have discovered a way to manipulate the mass being extruded in such a way that the porosity of the element formed from the mass is increased. At the end of the extruder the improved element is removed.

The examiner also argues that "(T)he specification also reads that the formation of the porous material and cooling it takes place outside the barrel". This is also erroneous. Note, for example, page 6, line 27 et seq. "(T)he porous structure is formed prior to the stage of moving the mixture from the barrel outlet ..."; and page 12, line 21 et seq., "... between the flights of the screw 5 and the interior surface of barrel 6 wherein the porous structure is formed; usw. Furthermore, there is no logical or legal basis for requiring that such details must be set forth in the claims.

It is submitted that original claim 1 was complete, as are all of the replacement claims, and that the 112 rejection should be withdrawn as improper ab initio.

The examiner has also rejected the original claims 1-12 as being unpatentable over Yang et al in view of Hughes et al and Barboza et al. This rejection is replete with errors. After quoting the express language of 35 USC 103(a), which includes the requirement that "the subject matter as a whole" must have been obvious, the examiner proceeds to pick the process into its individual steps, to find allegedly relevant pieces in different and unrelated patents, and then to combine the references using the individual pieces based only on what is needed in order to reject; without any suggestion in the references themselves that such combination is desirable, possible or logical.

The only teaching that certain elements of Applicants' process should be combined can be found in the present application. In fact, as will clearly be shown below, the references can not logically be combined and if combined using their own disclosures would result in a completely different process.

Like Applicant, Yang et al extrudes carbon block filter elements formed from a mixture of activated carbon and polymeric binder. However, Yang is concerned with forming a "uniform homogeneous extruded product" (col. 5, line 1), with the intent of avoiding areas of higher and lower density. In the face of this basic premise of the Yang patent, it is ludicrous to allege, as the examiner has done, that it can or should be combined with one or more references which are directed to making a non uniform product. Not only is there no teaching that the references should be combined, there is a clear teaching that the references should not be combined.

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Barboza et al discloses a process by which non-uniform product can be made, but it is not an extrusion process. Accordingly, if one were taught anything by Barboza it would be that a process using extrusion should not be used if it was desired to form a non-uniform product. This is also a teaching that is contrary to the examiner's proposal. Rather, one would, like Barboza, start with a core and then spray fibers of varying sizes onto the core.

Hughes et al adds nothing of value. The only disclosure of a product which could have varied densities is at col. 5, lines 46-53 where a depth filtration material is wrapped around the block. Nothing suggests a method of making a product such as Applicants, and certainly not in an extrusion process.

Applicants' invention can not be rendered obvious by incorporating teachings from the secondary references to modify Yang to produce filters having a modified density with increased porosity, as required by all of Applicants' claims.

Having clearly established that Applicants' invention as set forth in the independent claim 21 is patentable, it is unnecessary to get into the merits of the individual claims.

In view of the arguments set forth above it is clear that the claims define a new, useful and unobvious invention, and allowance of all of the claims is respectfully requested.

Respectfully submitted,
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